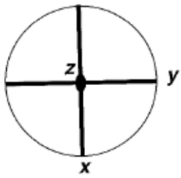


Exam practice questions

1. In a 2D crystal, what is the relationship between basis vectors of 'oc' lattice to the primitive lattice?
2. For  $60^\circ$  rotation about  $X_3$ , derive the relation between electrical conductivity tensor in the new and original axis.
3. Does the point group below support ferroelectricity?



4. For a tetragonal crystal with length along  $[101]$ , assuming principal resistivity values are known, derive the resistivity along the length. State all variables. What information about the lattice is needed to fully solve this problem?